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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,111

09/19/2006

Hermann Randecker

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4133

30448

7590

03/31/2009

AKERMAN SENTERFITT

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EXAMINER

HOWELL, DANIEL W

ART UNIT

PAPER NUMBER

3726

MAIL DATE

DELIVERY MODE

03/31/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/552,111	<b>Applicant(s)</b> RANDECKER ET AL.	
	<b>Examiner</b> Daniel W. Howell	<b>Art Unit</b> 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18, 20-22, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18, 20-22, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18, 20-22, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over German 3314718 in view of Nuzzi et al (6135681). Figures 2a and 2b of German '718 show a single-lip gun drill having a cutting edge 40 and an adjacent face 38 that leads to steps 41, the face 38 and step 41 cooperating to break the chips. All of the structure in figures 1 and 2 is integral, and the face 38 and the clearance face form a cutting wedge. The German reference does not appear to give explicit details about the face 38 (but is noted that Applicant has provided considerable argument on that point, and those points will be discussed below). Nuzzi et al shows a cutting edge 64 and an adjacent U-shaped groove 75 for forming a positive rake angle 80. See column 6, lines 40-51, and figure 8. Note that Nuzzi et al does meet the language added to the end of claim 1. The positive rake angle 80 helps form the chips, and the U-shaped groove aids in breaking the chips. As disclosed at column 7, lines 19-29, the tool may be coated with suitable coatings, including TiAlN. Lines 30-40 of column 6 and column 7, lines 19-22 of column 7, discuss manufacture of the insert from a blank by machining the surfaces, and column 7, lines 23+ state, "These base materials **can then be coated with hard coating materials....**" The words "can then be coated" clearly indicate that the cutter is coated **after machining of the cutting surfaces**. Note that Nuzzi et al also states that various combinations of these or other coatings can be used to accommodate numerous applications. It is considered to have been obvious to have provided German '718 with the U-shaped groove having a positive rake angle as

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taught by Nuzzi et al in order to greatly facilitate chip formation and breakage (column 6, line 43, Nuzzi et al) and dependent upon variables such as the material being machined and the dimensions of the hole, and to provide German '718 with the coating and layers of coatings of Nuzzi et al in order to provide hardness and edge retention qualities. Additionally, it is considered to have been obvious to have provided German '718 with the U-shaped groove as shown by Nuzzi et al as this is a simple substitution of one known element/cutting edge for another in order to obtain a predictable result of cutting a hole in a workpiece. Regarding claim 16, it is considered to have been obvious to have provided the coating after resharpener or regrinding, as those operations would otherwise remove the coating. While the angle 80 as shown in figure 8 may be measured as being about 16 degrees, and the chip break surface of Nuzzi et al is a certain distance from the cutting edge, it has been held that patent drawings are not to be taken as drawn to scale unless the reference states that it is to scale. It is considered to have been obvious to have experimented with various rake angles and distances and to have provided a value of between 10 and 30 or 15 and 25 degrees, and to have provided a distance of between .3 and .6 mm, depending on the particular characteristics of the material being drilled.

3. Applicant's arguments filed 3-10-09 have been fully considered but they are not persuasive. Applicant has objected strenuously to the examiner's previous language regarding items 38 and 40 of the German reference. While the examiner does not necessarily agree with Applicant's arguments on those points, it must be noted that the rejection has been reworded such that Nuzzi et al has been applied for the teaching of the details of the tool have and chip former, such that the previous language used by the examiner is now a moot point. Applicant has argued that one skilled in the art would not combine the teachings of German '718 and Nuzzi

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et al, as this would completely change the geometry of the drill head. It is well known to vary the cutting geometry of a cutting edge/region dependent upon such factors as the material being machined and the dimensions of the hole being made. Dependent on those factors, one skilled in the art would certainly look to the cutting geometry of Nuzzi et al for consideration of applying that geometry to the cutter of German '718. Applicant has pointed to the flat bottom hole of Nuzzi et al, but it is noted that Joseph Nuzzi has had 14 patents awarded to him in the last ten years, many of them showing cutting inserts having the widely known roof-shaped point angle, those cutting inserts having the very same chip breaking groove applied in this application. The cutting geometry of Nuzzi et al '681 may certainly be used in situations other than flat bottom hole making. Additionally, the fact that Nuzzi et al shows the cutting geometry on an insert is irrelevant, as the cutting geometry will work the same way whether is on a removable insert or not. Finally, it should also be noted that the rejection has also been framed in view of *KSR International Co. v Teleflex, Inc.*, (82 USPQ2d 1385). One of the standards for obviousness set forth there is that substitution of one known element for another would have provided predictable results to one of ordinary skill in the art at the time of the invention. While the examiner has provided rationale for combining the teachings of Nuzzi et al and German '718 (in order to greatly facilitate chip formation and breakage), the rejection has now also been framed in view of the *KSR* decision. Note that Nuzzi et al does meet the language added to the end of claim 1.

4. Any inquiry concerning the content of this communication from the examiner should be directed to Daniel Howell, whose telephone number is 571-272-4478. The examiner's office hours are typically about 10 am until 6:30 pm, Monday through Friday. The examiner's supervisor, David Bryant, may be reached at 571-272-4526.

In order to reduce pendency and avoid potential delays, Group 3720 is encouraging FAXing of responses to Office actions directly into the Group at FAX number to 571-273-8300.

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This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a USPTO deposit account. Please identify Examiner Daniel Howell of Art Unit 3726 at the top of your cover sheet.

/Daniel W. Howell/

Primary Examiner, Art Unit 3726